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RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 28

A NEW TOOTH-CARP FROM ARIZONA

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The American Museum of Natural History has received a single specimen of a peculiar aberrant tooth-carp, collected by the Richard Archbold Expeditions in Pima County, Arizona, in the summer of 1940. As its exact relationships are for the present uncertain, I am proposing a new genus as well as a new species for it. The occurrence of peculiar cyprinodont fishes in isolated desert environments of the West is not without precedent. We have *Empertrichthys* described from Death Valley by Gilbert in 1893, and the related *Crenichthys* from a warm spring of central Nevada by Hubbs in 1932.

The present specimen was from an isolated pool near the mouth of the canyon through which Tanque Verde Creek comes out of the hills to flow west to the Santa Cruz River near Tucson. At this season such isolated pools were all the water there was in the lower reaches of the creek, and though there was a local belief that fishes in them buried themselves in the sand and were thus able to survive periods when they went dry, the collectors were of the opinion that such pools dried out too completely later in the season for this to be possible.

Arzonichthys psammophilus, new genus, new species

DESCRIPTION OF TYPE.—No. 15373 American Museum of Natural History, from 3 1/2 miles east of Tanque Verde, Pima County, Arizona, altitude 2750 ft., collected by the Richard Archbold Expeditions, June, 1940.

Length to base of caudal, 48 mm. Depth in this length, 3.5; head, 4.5; length of peduncle, 3.15. Eye in head, 3.7; snout, 4; interorbital, 1.8; width of mouth, 4; width of body, 1.3; depth of peduncle, 1.5; its length, 0.7; pectoral, 1.2; ventral, 2.1; longest dorsal ray, 1.1; longest anal ray, 1.2; caudal (broken), 1.2.

Dorsal rays, 8; anal, 9 (the first 3 simple, the

first 1/2 the length of the second, which is 4/7 that of the third). Scales, 30 (lateral line pores only appreciable on the posterior ones).

Head short, broad, blunt, rounding down abruptly before the eyes to give it a peculiar appearance, the thick-lipped mouth somewhat protruding. Back of the head broad and flat, the profile rising at the nape. Mouth small, transverse; the jaws weak (not firm), the upper very protractile, the lower slightly projecting. A row of small, simple, in-curving, bluntly pointed teeth in the lower jaw may be seen with a hand lens, and a similar row of smaller teeth in the upper jaw with a binocular microscope. Three large pores in a more or less vertical row back of the eye, with a fourth, lowest, less conspicuous one at the middle of the vertical preopercular margin. Gill-membranes narrowly joined, free from the isthmus. Back somewhat elevated; breast and belly deep, broad, rounded; tail compressed. Two conspicuous blunt papillae immediately before the anal origin, the anterior and larger, white, the posterior blackish, as is also a small, double fleshy swelling on the anal origin. Dorsal origin equidistant from pectoral and caudal bases, slightly behind that of the anal; dorsal with a narrow rounded summit, anal with a low, sharp point in front; ventrals not nearly reaching anal; pectorals in poor condition and corners of caudal broken off.

Color in preservative, yellowish brown on the back, somewhat paler below, with a fairly distinct dark mesial band from over the ventrals to the caudal base. Scales of the back with broad dark borders, which change to narrower more central bands where they disappear at or below the midline of the sides. The small head, elevated back, long, compressed tail with dark mesial band, give the fish rather the appearance of a cyprinid than a cyprinodont.

Collected with this type are several slender fry of 12 to 22 mm. standard length. They are not in good condition, but their broad heads (though less peculiar in form), with small mouth and very protractile upper jaw, leave little doubt that they are young of the same species. The largest has depth in standard length, about 5. Its caudal (broken in the type) is long (about

as long as the head and 3.5 in length), perfect, narrowed toward and squarish or bluntly rounded at the end. Its teeth

stand out better than those of the larger specimen, and are seen to be movable, curved, spoon-shaped with slender bases.